



## Subject Index Volumes 145–153

Abruzzi Italy, (150) 79  
Absolute age, (146) 329, (146) 645, (146) 659, (147) 25, (148) 273, (148) 287, (151) 107, (152) 59  
Absolute ages, (150) 337  
Abyssal plains, (151) 233  
Accretion, (146) 541, (149) 1, (153) 119  
Accretionary prism, (148) 423  
Acoustical logging, (150) 221  
Aerosols, (146) 573  
Alkali basalts, (149) 67  
Alloys, (153) 149  
Almaden Spain, (148) 287  
Alpine environment, (150) 413  
Alps, (146) 627, (148) 485  
Alteration, (145) 79, (148) 287, (151) 139, (151) 279  
Aluminium, (153) 223  
Ammonites, (146) 659  
Amphibole group, (150) 245  
Anaerobic environment, (145) 65, (148) 517  
Anatexis, (148) 273  
Anchimetamorphism, (150) 337  
Anisian, (146) 107, (152) 37  
Anisotropy, (152) 25  
Anomaly, (149) 113  
Antarctica, (146) 573  
Antimony, (145) E1  
Anvil cells, (145) 97  
Apatite, (146) 329  
Apparent polar wandering, (146) 97  
Arabian Shield, (152) 75  
Ar/Ar, (147) 25, (148) 223  
Ar-40/Ar-36, (151) 225  
Ar-40/Ar-39, (146) 645, (150) 205, (150) 337, (151) 107, (151) 139  
Archean, (149) 1, (150) 325  
Arctic Ocean, (146) 47, (152) 1  
Argon, (145) 97  
Arid environment, (147) 69  
Arsenic, (145) E1  
Asia, (145) 1  
Assimilation, (146) 303  
Asthenosphere, (146) 465  
Atlantic Ocean, (150) 205  
Atmosphere, (145) E1, (152) 101  
Attenuation, (150) 221, (151) 1  
Australia, (151) 61, (153) 279  
Authigenic minerals, (145) 65  
Back-arc basins, (149) 1, (150) 261  
Bacteria, (145) 125  
Baikal rift zone, (149) 29  
Barberton greenstone belt, (150) 303  
Barium, (150) 141  
Basalt, (148) E1  
Basalt flows, (146) 415  
Basalts, (148) 259, (148) 471, (149) 15, (150) 103, (151) 139, (153) 181, (153) 197  
Basanites, (149) 67  
Basins, (148) 447  
Bay of Bengal, (150) 141  
Be-10, (150) 453  
Be-10 boundary scavenging, (149) 121  
Be-10 production rate, (149) 121  
Beryllium, (146) 315  
Biochronology, (146) 659, (146) 677  
Biostratigraphy, (145) 15, (146) 107  
Black Sea, (145) 65, (148) 517  
Black shale, (148) 517  
Black smokers, (149) 101, (153) 239  
Blueschist facies, (151) 77  
Boninite, (151) 205  
Boron, (146) 303, (146) 315, (152) 113, (152) 123  
Brazil, (151) 139  
Brines, (146) 121, (151) 225  
Brunhes Epoch, (146) 73  
Bulk silicate earth, (148) 243  
Bunter, (152) 37  
Burial, (147) 141  
C-13/C-12, (146) 13, (146) 83, (147) E1, (148) 349, (151) 255  
C-14/C-12, (150) 453  
Calcite, (148) 317  
Calibration, (146) 659  
Calorimetry, (153) 209  
Carbon, (148) 501, (150) 463  
Carbonates, (152) 113  
Carboniferous, (148) 359  
Cathodoluminescence, (151) 191  
Cenozoic, (150) 55, (153) 119  
Central Pacific, (146) 1  
Chandler wobble, (153) 287  
Chaya Massif, (148) 299  
Chemical composition, (153) 37  
Chemical fractionation, (147) 11, (148) 193, (148) 329

Chloride ion, (149) 113  
 Chlorine, (148) 485, (150) 95  
 Chondrites, (146) 337  
 Chondritic planetary reference, (148) 243  
 Chromatography, (153) 1  
 Chromite, (146) 489  
 Chronostratigraphy, (145) 1, (150) 171  
 Clay minerals, (150) 337  
 Climate, (150) 453, (151) 117  
 Climatic controls, (148) 367  
 Cobalt, (146) 499  
 Coesite, (153) 133  
 Collagen, (153) 279  
 Color, (152) 187  
 Columbia River Basalt Group, (150) 443  
 Communities, (148) 69  
 Compaction, (148) 423  
 Condensation, (146) 315  
 Continental crust, (146) 379, (149) 15  
 Continental margin, (146) 181, (146) 195, (151) 233  
 Continents, (148) 447, (150) 233  
 Convection, (145) 109, (146) 121, (146) 367, (146) 379, (146) 393, (146) 401, (148) 13, (148) 59, (148) 457, (151) 125  
 Core, (146) 541, (150) 463, (152) 139, (153) 149  
 Core-mantle boundary, (149) 43  
 Cores, (145) E1  
 Correlation, (150) 79  
 Coseismic processes, (153) 287  
 Cosmic dust, (145) 31  
 Cosmogenic elements, (147) 37, (150) 453, (152) 59  
 Cosmogenic nuclide, (148) 545  
 Cosmogenic radionuclides, (150) 413  
 Cracks, (148) 405  
 Cratons, (151) 271  
 Crust, (147) 107, (148) 93, (150) 65, (152) 233  
 Crustal shortening, (147) 1  
 Crustal thinning, (146) 415, (149) 29  
 Crystal zoning, (146) 329  
 Cumulates, (146) 475  
 D/H, (147) 69  
 Dabie Mountains, (151) 191  
 Dalradian, (146) 527  
 Death Valley, (147) 69  
 Deep-focus earthquakes, (148) 27  
 Deformation, (146) 351, (150) 191, (151) 181  
 Degassing, (152) 233  
 Dehydration, (148) 193, (148) 207  
 Density, (146) 121  
 Deposition, (145) E1, (153) 265  
 Diamictite, (148) 359  
 Diamond, (151) 271  
 Diapirs, (146) 415  
 Diffusion, (148) 273(148) 527, (150) 277, (153) 229  
 Dinosaurs, (148) 569  
 Displacements, (150) 55  
 Diurnal variations, (153) 239  
 Dolomites, (146) 107  
 Ductility, (146) 415  
 Dunes, (152) 187  
 Dust, (146) 573  
 Dynamic topography, (148) 447, (149) 49  
 Dynamos, (149) 43  
 Phase E, (149) 57  
 Earthquake precursor, (149) 113  
 Earthquakes, (148) 171, (153) 287  
 East African Rift, (153) 67  
 East Greenland, (146) 645  
 East Pacific Rise, (146) 243, (146) 449, (148) 471, (149) 101, (151) 13  
 Eclogite, (148) 223, (151) 191  
 Effective stress, (148) 423  
 Eh, (145) 65  
 Elasticity, (147) E9  
 Electrical conductivity, (150) 41  
 Electron microscopy, (146) 499, (150) 353, (151) 279  
 Element fractionation, (148) 207  
 El Nino, (148) 381  
 Emperor Seamounts, (153) 171  
 Emplacement, (151) 155  
 Enthalpy, (153) 209  
 Environmental analysis, (152) 187  
 Eolianite, (152) 163  
 Epizonal metamorphism, (150) 337  
 Equations of state, (153) 149  
 Equilibrium, (148) 273  
 Erosion, (146) 627, (150) 7, (150) 117  
 Erosion rates, (150) 413  
 Eruptions, (151) 155  
 Estuarine sedimentation, (148) 341  
 Evaporites, (151) 225  
 Evolution, (148) 1  
 Experimental studies, (150) 381  
 Explosive eruptions, (150) 177  
 Exposure age, (147) 37  
 Extension tectonics, (146) 181, (150) 7, (150) 41  
 Extinction, (148) 569  
 Fault zones, (150) 55  
 Faunal provinces, (145) 15  
 Ferromanganese composition, (151) 91  
 Fiji, (151) 107  
 Fission-track dating, (151) 167  
 Fission tracks, (150) 277  
 Flexure, (146) 431, (146) 449  
 Flood basalts, (150) 443  
 Fluid dynamics, (146) 527, (152) 93  
 Fluid inclusions, (148) 485  
 Fluid phase, (148) 223, (150) 41, (150) 95, (150) 381, (151) 77, (152) 123  
 Fluvial features, (152) 59  
 Flysch, (152) 217  
 Fractals, (146) 401  
 Fractionation, (149) 85, (153) 21  
 Fracture zones, (148) 93  
 Fracturing, (146) 555

Framboidal texture, (148) 517  
 French Guiana, (150) 205  
 Frost action, (150) 413  
 Gabbros, (146) 475  
 Garnet group, (151) 271  
 Gases, (148) 501  
 Geochemistry, (146) 273, (146) 289, (146) 465, (146) 627, (147) 25, (147) 93, (148) 69, (148) 93, (148) 299, (148) 341, (149) 67, (150) 291, (150) 363, (150) 381, (150) 443, (152) 1, (152) 113  
 Geochronology, (145) 79, (150) 277, (150) 427, (151) 191  
 Geodynamics, (148) 13  
 Geoid, (146) 367, (151) 125, (153) 37  
 Geologic barometry, (146) 645, (150) 303  
 Geologic thermometry, (150) 303  
 Geomagnetic field intensity, (149) 121  
 Geophysics, (146) 351  
 Geosat, (152) 267  
 Geothermal gradient, (147) 1  
 Glaciation, (147) 55, (148) 359, (148) 367, (151) 117, (153) 157  
 Glass, (148) 433  
 Global warming, (148) 367  
 Gondwana, (151) 139, (153) 85  
 Gorgona Island Colombia, (146) 289  
 Gowganda Formation, (153) 157  
 Grains, (152) 163  
 Grain size, (148) 27  
 Granulites, (150) 95  
 Gravity anomalies, (145) 109, (148) 59, (150) 65, (150) 233, (152) 267  
 Gravity methods, (146) 165  
 Gravity surveys, (149) 29  
 Great Basin, (150) 41  
 Greenland ice sheet, (150) 161  
 Grenvillian Orogeny, (150) 427  
 Ground water, (150) 141  
 Groundwaters, (148) 501  
 Guinea, (150) 205  
 Hafnium, (151) 91  
 Halides, (150) 325  
 Halogens, (150) 95  
 Harzburgite, (146) 243  
 Hawaii, (150) 399, (153) 171  
 Hawaii Island, (148) 141  
 He-4, (151) 225  
 Heat flow, (145) 109, (146) 137, (146) 151, (151) 33, (151) 233  
 Heat transfer, (152) 93  
 He-3/He-4, (151) 225  
 He-4/He-3, (150) 443, (151) 255, (153) 57  
 Helium, (148) 501, (151) 167  
 Hellenic Arc, (146) 107  
 Highlands, (147) 1  
 High pressure, (145) 97, (146) 511, (153) 133  
 High-pressure research, (146) 499  
 High-temperature, (146) 489, (153) 209  
 Himalayas, (145) 1, (146) E1, (150) 117  
 Holmium, (148) 329  
 Holocene, (153) 251  
 Hot spots, (145) 109, (146) 213, (148) 13, (148) 69  
 Hotspots, (153) 171  
 Huronian, (153) 157  
 Hydrogen peroxide, (147) 83  
 Hydrothermal alteration, (145) 79  
 Hydrothermal conditions, (145) 49, (146) 137, (146) 151, (152) 93, (153) 239  
 Hydrothermal processes, (149) 101, (151) 91  
 Hydrothermal vents, (148) 69, (152) 93  
 Iberian Peninsula, (146) 689, (151) 233  
 Icebergs, (146) 29  
 Ice-cores, (146) 573  
 Iceland, (148) E1, (151) 43, (153) 181, (153) 197  
 Igneous rocks, (146) 475  
 Impact craters, (147) 1, (147) 25  
 Impact features, (146) 351  
 Inclusions, (151) 205  
 India, (145) 1  
 Indian Ocean, (147) 83, (147) 93  
 Inductively coupled plasma methods, (145) 79, (147) 11  
 Injection, (148) 405  
 Intraplate processes, (153) 85  
 Inverse problem, (151) 1  
 Ion probe data, (146) 337, (150) 27  
 Iran, (147) E1  
 Iridium, (145) 31  
 Iron, (147) 83, (153) 223  
 Iron meteorites, (147) 11, (152) 181  
 Iron minerals, (152) 187  
 Iron oxides, (148) 341  
 Island arcs, (146) 303, (146) 465, (148) 207, (148) 259, (150) 291, (151) 205  
 Isostasy, (150) 233  
 Isotope ratios, (146) 303, (150) 117, (150) 161, (151) 91, (152) 1, (152) 75, (152) 123, (152) 181, (153) 21  
 Isotopes, (146) 165, (148) 259, (148) 299, (148) 501, (148) E1, (150) 95, (150) 291, (151) 43, (151) 77, (151) 255, (152) 233  
 Japan, (153) 119  
 Japan Sea, (145) 65  
 K-T boundary, (148) 569  
 Kalahari Desert, (147) 25  
 Kimberlite, (150) 129  
 Kinetics, (146) 527, (148) 27, (148) 317, (150) 277, (153) 133  
 Komatiite, (146) 289, (150) 303  
 Kuril Islands, (152) 123  
 Labrador Sea, (150) 151  
 Ladinian, (146) 107  
 Lake sediments, (153) 251  
 Laser methods, (145) 79, (147) 11  
 Last glacial maximum, (146) 591  
 Lau Basin, (151) 205  
 Lava flows, (148) 141  
 Lead, (145) E1, (146) 1, (151) 43, (151) 91  
 Leg 116, (150) 117  
 Limestone, (150) 79  
 Lithosphere, (145) 109, (146) 213, (146) 379, (146) 431, (146)

449, (146) 465, (146) 511, (147) 1, (147) 107, (148) 157, (149) 15, (150) 103, (150) 129, (150) 191, (150) 245, (151) 181, (152) 75  
 Llallagua, Bolivia, (146) 329  
 Loess Plateau, (146) 73  
 Logging-while-drilling, (148) 423  
 Loihi Seamount, (150) 399  
 Long Island Sound, (148) 341  
 Long Valley Caldera, (150) 27  
 Lorrain Formation, (153) 157  
 Lower Cambrian, (147) E1  
 Lower Cretaceous, (153) 85  
 Lower crust, (146) 415, (146) 475, (148) 223  
 Lower mantle, (150) 399  
 Lower Ordovician, (145) 31  
 Lower Tertiary, (152) 267  
 Lower Triassic, (152) 37  
 Lu-Hf system, (148) 243  
 Luminescence, (152) 163  
 Lunar soil, (148) 545  
 Macquarie Ridge, (148) 129  
 Macropodidae, (153) 279  
 Mafic magmas, (148) 299  
 Magellan Program, (145) 109  
 Maghemite, (151) 279  
 Magma chambers, (150) 261, (151) 155  
 Magma contamination, (150) 103  
 Magma degassing, (148) 501  
 Magma oceans, (146) 541  
 Magmas, (146) 273, (146) 303, (146) 555, (148) 207, (148) 259, (148) 405, (150) 177, (150) 291, (151) 205, (152) 123  
 Magnesian silicates, (146) E9  
 Magnetic field, (147) 55, (148) 581, (152) 11  
 Magnetic hysteresis, (152) 203  
 Magnetic intensity, (148) 141, (152) 11, (153) 103  
 Magnetic properties, (145) 125, (152) 187  
 Magnetic susceptibility, (152) 203  
 Magnetite, (146) 337, (152) 25  
 Magnetization, (151) 279  
 Magnetostratigraphy, (145) 15, (146) 107, (146) 677, (148) 569, (148) 581, (150) 79, (151) 107, (152) 37  
 Main Central Thrust, (146) E1  
 Major-element chemistry, (149) 49  
 Major elements, (153) 37  
 Mammals, (146) 677  
 Manganese, (146) 499  
 Mantle, (145) 109, (146) 243, (146) 367, (146) 401, (146) 431, (146) 499, (146) E9, (148) 59, (148) 433, (148) 457, (148) 501, (149) 15, (150) 65, (150) 129, (150) 233, (151) 33, (151) 61, (151) 125, (151) 271, (152) 101, (152) 149, (152) 233, (152) 251, (153) 1, (153) 67, (153) 209  
 Mantle flow, (148) 447  
 Mantle heterogeneity, (148) 243  
 Mantle melting, (149) 67  
 Mantle P-T conditions, (149) 57  
 Mantle plumes, (146) 259, (146) 289, (146) 379, (146) 465, (148) 1, (148) 13, (148) 109, (150) 245, (151) 43, (153) 181, (153) 197, (153) 209  
 Mantle source heterogeneity, (148) 471  
 Marine sediments, (151) 117  
 Mars, (148) 457  
 Martinique, (146) 303  
 Mass exchange, (150) 1  
 Mass spectroscopy, (145) 79, (147) 11  
 Mathematical models, (148) 1  
 Mauna Loa, (153) 21  
 Meanders, (153) 265  
 Median ridge, (146) 449  
 Mediterranean Sea, (151) 225  
 Melting, (146) 213, (146) 273, (146) 289, (150) 245, (153) 209, (153) 223  
 Melts, (145) 97, (146) 243, (146) 555, (148) 59, (148) 405, (151) 205, (152) 149, (153) 1, (153) 67, (153) 209  
 Meltwater, (146) 13  
 Mendocino triple junction, (148) 45  
 Mercury ores, (148) 287  
 Mesozoic, (146) 689  
 Messinian, (151) 225  
 Metals, (146) 541, (148) 341, (151) 289  
 Metamorphic rocks, (150) 277  
 Metasomatism, (146) 527, (146) E1, (151) 289, (146) 511, (148) 433, (151) 61, (151) 77, (152) 75, (153) 67  
 Meteorites, (145) 31, (146) 337  
 Microlite, (150) 177  
 Mid-Arctic Ocean Ridge, (152) 1  
 Mid-Atlantic Ridge, (146) 259, (148) 59, (148) 69  
 Mid-ocean ridge basalts, (146) 243, (147) 93, (150) 353, (150) 363, (152) 1, (152) 251, (153) 37, (153) 181  
 Mid-ocean ridges, (145) 49, (146) 213, (146) 243, (146) 475, (148) 93, (148) 405, (149) 101, (151) 181, (152) 251, (153) 181, (153) 197  
 Milankovitch theory, (147) 55  
 Mineral deposits, (151) 91  
 Mineral inclusions, (146) 489  
 Mineralization, (148) 287  
 Mineralogy, (152) 1  
 Miocene, (146) 83  
 Mixing, (146) 401, (147) 93, (150) 363  
 Models, (145) 109, (146) 393, (146) 401, (146) 591, (147) 107, (148) 59, (148) 109, (149) 29, (151) 117, (152) 75, (153) 1  
 Modern, (150) 453  
 Mohorovicic discontinuity, (146) 475, (150) 233  
 Monazites, (145) 79  
 Monsoons, (146) 59  
 MORB, (149) 49  
 Morocco, (145) 15  
 Morokweng, (146) 351  
 Mount Etna, (147) 125, (148) 171, (148) 501, (153) 57  
 Movement, (153) 171  
 Mud volcanoes, (147) 141  
 Muscovite, (148) 223  
 Namib Desert, (152) 187  
 Nd-144/Nd-143, (146) 259, (146) 607, (146) 627  
 Ne-22/Ne-20, (150) 399  
 Ne-22/Ne20, (150) 443

Ne-22/Ne-21, (150) 443  
 Neodymium, (146) 1, (150) 427  
*Neogloboquadrina pachyderma*, (146) 47  
 Neon, (153) 57  
 Neutrons, (152) 181  
 New York City New York, (148) 341  
 Nickel, (146) 499  
 N-15/N-14, (148) 349, (151) 77, (152) 101, (153) 279  
 Noble gases, (150) 399, (152) 101, (152) 233  
 Nodules, (151) 91  
 Normal faults, (147) 125, (151) 181  
 North America, (146) 97  
 North Anatolian Fault, (150) 191  
 North Atlantic, (146) 13, (146) 29, (146) 259, (153) 103, (153) 197  
 North Atlantic Deep Water, (146) 13, (152) 25  
 Northeast Atlantic, (146) 195  
 Northern Andes, (150) 427  
 North Pacific, (152) 11  
 North Sea, (148) 109  
 Northwest Atlantic, (146) 607  
 Nubian Shield, (152) 75  
 Numerical models, (146) 151  
 O-18, (153) 103  
 Ocean basins, (146) 195  
 Ocean circulation, (146) 591  
 Ocean Drilling Program, (150) 221, (151) 233, (152) 11  
 Ocean floors, (151) 279  
 Oceanic crust, (146) 137, (146) 151, (146) 431, (147) 93, (150) 221, (150) 245  
 Oceanic crust recycling, (148) 471  
 Oceanic floors, (148) 129  
 Ocean-island basalts, (148) 193  
 ODP Site 851, (152) 113  
 Olivine, (146) 337, (148) 457  
 O-17/O-16, (146) 337  
 O-18/O-16, (146) 13, (146) 47, (146) 337, (146) 591, (147) 69, (148) 381, (150) 171, (151) 117  
 Opal, (149) 85  
 Ophiolite, (146) 489  
 Ordinary chondrites, (151) 289  
 Organic carbon, (147) 141, (148) 341  
 Organic materials, (147) 141  
 Orogeny, (148) 157, (150) 233  
 Osmium, (148) 341, (150) 103, (150) 117, (150) 363, (151) 61, (153) 21  
 Os-187/Os-186, (148) 341, (150) 129  
 Oxidation, (148) 341  
 Oxygen, (148) 527  
 Oxygen isotopes, (148) 527  
 Pacific Plate, (153) 119  
 Palaeoclimatology, (153) 279  
 Paleocene, (146) 195  
 Paleocirculation, (146) 13, (146) 607  
 Paleoclimatology, (146) 29, (146) 83, (147) 37, (148) 381, (152) 25, (152) 203  
 Paleoenvironment, (148) 349  
 Paleomagnetism, (146) 73, (146) 97, (146) 689, (147) 55, (148) 141, (148) 553, (148) 581, (149) 43, (150) 79, (151) 107, (153) 103, (153) 119, (153) 157, (153) 171  
 Paleo-oceanography, (147) E1  
 Paleoproductivity, (149) 85  
 Paleosalinity, (146) 29, (150) 325  
 Paleosols, (146) 83  
 Pangea, (148) 553  
 Partial melting, (150) 303, (152) 149, (152) 251  
 Partition coefficients, (146) 541, (150) 381  
 Partitioning, (150) 463, (152) 139  
 Passive margins, (146) 181  
 Patagonia, (146) 573  
 Pb/Pb, (152) 217  
 Peat bogs, (145) E1  
 Pedogenesis, (152) 203  
 Peridotite, (146) 273, (153) 209  
 Peridotites, (150) 381, (151) 61, (151) 271, (152) 149, (152) 251  
 Permeability, (146) 137  
 Permian, (148) 553  
 Petrology, (146) 475  
 Phase equilibria, (146) 555, (150) 303, (152) 149  
 Phase transitions, (146) 379, (148) 27, (148) 457, (153) 133  
 Philippine Islands, (151) 1  
 Phlogopite, (146) 511, (150) 245  
 Phosphates, (150) 277  
 Physical models, (148) 1  
 Phytoplankton, (147) 83  
 Piedmont Alps, (146) 181  
 Planetary differentiation, (148) 243  
 Plate boundaries, (148) 129, (148) 157, (151) 13, (153) 85  
 Plate collision, (145) 1, (151) 191  
 Plate rotation, (146) 689  
 Plate tectonics, (151) 13, (152) 267, (153) 171  
 Platinum group, (147) 11, (148) 341  
 Pleistocene, (151) 117  
 Pliocene, (146) 677, (151) 107  
 Plumes, (146) 393, (148) E1, (150) 443  
 Plutonic rocks, (150) 277  
 Podiform deposits, (146) 489  
 Poland, (152) 37  
 Polar wandering, (153) 287  
 Pole positions, (146) 97  
 Pollen, (150) 171  
 Pollutants, (148) 341  
 Pore water, (152) 113  
 Porites, (148) 381  
 Porosity, (148) 423  
 Precambrian, (153) 157  
 Upper Precambrian, (147) E1  
 Pressure, (150) 177, (153) 223  
 Primitive mantle, (148) 243  
 Production rate, (148) 545  
 Protactinium, (148) 259  
 Proterozoic, (151) 61  
 Upper Proterozoic, (151) 191  
 Provenance, (146) 607, (150) 161, (152) 217

Pyrenees, (150) 65  
 Pyrite, (148) 517  
 Pyrope, (146) 511  
 Pyroxene group, (150) 303  
 Pyrrhotite, (151) 289  
 Qinghai-Xizang Plateau, (150) 55  
 Quartz, (152) 163, (153) 133  
 Quaternary, (147) 125, (148) 141, (150) 171  
 Radioactive isotopes, (146) 573, (148) 273, (148) 341  
 Radioactive waste, (145) 79  
 Radionuclides, (149) 85  
 Radium, (150) 141  
 Raman spectrum, (149) 57  
 Rare earths, (145) 79, (151) 191  
 Reconstruction, (150) 427, (152) 267  
 Recrystallization, (150) 277  
 Recycling, (147) 93  
 Red Sea, (148) 381  
 Reduction, (148) 341  
 Regional metamorphism, (151) 191  
 Remanent magnetism, (148) 581  
 Re/Os, (150) 129, (151) 61  
 Residence time, (146) 1, (148) 329, (150) 27  
 Reversals, (147) 55, (148) 581, (149) 43  
 Rheology, (146) 401, (147) 1, (147) 107, (148) 27, (150) 7  
 Rhyolites, (150) 27  
 Rifting, (147) 125, (149) 29, (150) 205, (152) 233  
 Rift zones, (146) 181, (150) 7, (153) 181  
 Ring silicates, (145) 97  
 Rivers and streams, (150) 141  
 Romanche fracture zone, (146) 273  
 Rotation, (146) 233, (150) 191  
 Saanich Inlet, (145) 65  
 Salton Sea geothermal field, (146) 121  
 Sand bodies, (153) 265  
 Sangamonian, (152) 203  
 Scale models, (153) 265  
 Scandinavia, (153) 251  
 Scavenging, (149) 85  
 Scotia Sea, (150) 261  
 Sea floor alteration, (148) 485  
 Sea-floor spreading, (146) 233, (148) 405, (150) 261, (151) 13  
 Seamounts, (148) 471  
 Seawater, (147) 83, (148) 317, (148) 329, (150) 117, (150) 325  
 Sedimentary basins, (146) 415  
 Sedimentation, (146) 627, (150) 7  
 Sediment redistribution, (149) 121  
 Segmentation, (148) 59, (148) 405  
 Seismic intensity, (151) 1  
 Seismic logging, (150) 221  
 Seismic profiles, (148) 171  
 Seismic surveys, (148) 93  
 Seismology, (151) 125  
 Semail Ophiolite, (146) 489  
 Serpentinitization, (151) 181  
 Sewage sludge, (148) 341  
 Shear, (151) 33  
 Shield volcanoes, (150) 177  
 Shock metamorphism, (146) 351  
 Siberia, (151) 271  
 Siderophile elements, (146) 541, (150) 463  
 Side-scanning methods, (148) 129  
 Sierra Nevada, (151) 167  
 Silicates, (146) 541, (150) 95, (150) 277, (153) 229  
 Silicon, (152) 139, (153) 149, (153) 229  
 Sills, (146) 475  
 Single domains, (150) 353  
 Skaergaard Intrusion, (146) 645  
 Slabs, (146) 465  
 Slip rates, (147) 125  
 Smectite, (152) 25  
 Sm/Nd, (146) 329, (146) 607, (146) 627  
 Solar activity, (150) 453  
 Solar nebula, (146) 315  
 Solubility, (145) 97  
 Solution, (148) 317  
 South Africa, (146) 351  
 South Atlantic, (147) 83  
 South China Sea, (146) 59  
 Southeast Asia, (146) 59  
 Southern Appalachians, (146) 165  
 Southern Europe, (148) 569  
 Southern Ocean, (149) 85  
 Southwest Pacific, (152) 267  
 Spinel, (147) E9, (148) 457  
 Spreading centers, (146) 233, (146) 465  
 Spring water, (149) 113  
 Sr-87/Sr-86, (146) 259  
 Stable isotopes, (148) 349  
 Strain change, (149) 113  
 Stratification, (146) 121  
 Stratigraphy, (150) 79  
 Strontium, (153) 21  
 Subduction, (148) 193, (148) 207, (148) 485, (149) 15, (150) 261, (150) 291, (151) 77, (151) 255, (153) 287  
 Subduction zones, (146) 465, (148) 27, (148) 157, (150) 381, (152) 123  
 Subsidence, (146) 195  
 Sulfides, (145) 49, (145) 65, (147) 69  
 Sulfur, (152) 139, (153) 149  
 Surinam, (150) 205  
 Synthetic materials, (146) E9  
 TAG hydrothermal field, (153) 239  
 Taiwan, (146) 59  
 Tasman Sea, (148) 129  
 Tectonics, (147) 1, (147) 125, (148) 359, (150) 79, (150) 233, (151) 191, (152) 217, (153) 119  
 Tectonite, (148) 299  
 Teeth, (146) 83  
 TEM data, (145) 125, (148) 223  
 Tenerife, (146) 431  
 Terraces, (152) 59  
 Terrestrial environment, (145) 15, (148) 569  
 Tertiary, (148) 109

Tesserae, (147) 1  
Tethys, (148) 553  
Thermal evolution, (148) 45  
Thermal history, (151) 167  
Thermal maturity, (147) 141  
Thermal neutron, (148) 545  
Thermal regime, (149) 1  
Thermohaline circulation, (148) 367  
Th-230 normalization, (149) 121  
Tholeiite, (150) 205  
Thorium, (145) 79, (150) 151  
Three-dimensional model, (148) 45  
Thrust sheets, (146) 165  
Tides, (153) 239  
Tillite, (147) 37  
Time series analysis, (151) 117  
Titanomagnetite, (150) 353, (151) 279  
Toarcian, (146) 659  
Topography, (145) 109, (146) 367, (151) 125  
Trace elements, (147) E1, (148) 193, (148) 471, (150) 291, (150)  
381, (151) 205, (153) 197  
Trace metals, (145) 65  
Tracers, (148) 341  
Transform faults, (146) 449, (146) 465, (148) 129  
Transition zones, (146) E9, (147) E9  
Transpression, (146) 449  
Triassic, (148) 553, (151) 191  
Troilite, (151) 289  
Tungsten, (152) 181  
Two-layer mantle, (150) 1  
U/Pb, (145) 79, (146) 659, (147) 25, (150) 277, (151) 191, (152)  
217  
Ultramafic rocks, (148) 485  
Uplifts, (147) 37, (147) 107, (148) 109  
Upper Cretaceous, (150) 79  
Upper mantle, (146) 393, (147) E9, (149) 1, (150) 363  
Upper Miocene, (145) 15  
Upwelling, (146) 213, (146) 393  
Uranium disequilibrium, (148) 259  
U-238/U-234, (153) 251  
Vegetation, (146) 83  
Venus, (145) 109, (147) 1  
Vesicular texture, (146) 555  
Viscosity, (145) 109, (146) 555, (150) 177, (151) 33  
Volcanic arcs, (146) 431  
Volcanic processes, (153) 85  
Volcanism, (145) 109, (146) 213, (148) 171, (153) 85  
Volcanoes, (151) 255  
Water, (147) 1, (147) 69  
Water of crystallization, (150) 303  
Water vapor, (146) 555  
Weathering, (150) 413  
Welsh Basin, (150) 337  
Western U.S., (150) 103  
Woodlark Basin, (146) 233  
Xenolith, (148) 433  
Xenoliths, (150) 129  
Xenon, (153) 57  
Xuzang China, (148) 359  
Yttrium, (148) 329  
Zircon, (148) 527, (150) 27, (152) 217



